

**Notice of Allowability**

Application No.

10/564,573

Examiner

Jurie Yun

Applicant(s)

HEUSCHER, DOMINIC J.

Art Unit

2882

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment after final filed 10/2/07.
2. ☒ The allowed claim(s) is/are 1-20, 22-26, 28 and 29.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some\* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |  |   |
|--|---|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892)   | 5. <input type="checkbox"/> Notice of Informal Patent Application                     |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____ |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),<br>Paper No./Mail Date _____    | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment                   |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance  |
|  | 9. <input type="checkbox"/> Other _____   |

**DETAILED ACTION**

1. The amendment filed 10/2/07 has been entered.

**EXAMINER'S AMENDMENT**

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Anthony M. Del Zoppo III on 10/10/07.

The application has been amended as follows:

In claim 14, line 14, after "a" and before "cylindrical" insert --rotating--

In claim 25, line 7, after "a" and before "cylindrical" insert --rotating--

***Allowable Subject Matter***

3. Claims 1-20, 22-26, 28, and 29 are allowed.
4. The following is an examiner's statement of reasons for allowance: Prior art fails to disclose an x-ray tube that injects an x-ray conebeam into an examination region, the x-ray tube including a rotating helical-slot collimator that rotates around the cylindrical anode, and a sweep means for relatively longitudinally sweeping the at least one selected spot across the target outer surface region of the cylindrical anode in coordination with rotating the helical-slot collimator, as claimed in claim 1. Claims 2-13 are allowed due to their dependency on claim 1.

Art Unit: 2882

Prior art fails to disclose a CT scanner including a rotating cylindrical helical-slot collimator, surrounding the rotating cylindrical anode, adapted to collimate the generated x-rays as the spot sweeps across the target, as claimed in claim 14. Claims 15-16 are allowed due to their dependency on claim 14.

Prior art fails to disclose a method of generating x-rays including rotating a helical-slot collimator around a collimator axis that is parallel to the cylinder axis, and relatively sweeping the at least one selected spot continuously across the target outer surface region of the cylindrical anode along a beam trajectory substantially parallel to the cylinder axis and in coordination with rotating the helical-slot collimator, as claimed in claim 17. Claims 18-20 and 22-24 are allowed due to their dependency on claim 17.

Prior art fails to disclose an x-ray tube, comprising an anode positioner that selectively positions the cylindrical anode longitudinally with respect to the electron accelerator, in combination with a rotating cylindrical helical-slot collimator adapted to collimate a radiation beam emitted from the focal spot, as claimed in claim 25. Claims 26, 28, and 29 are allowed due to their dependency on claim 25.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

**Conclusion**

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jurie Yun whose telephone number is 571 272-2497. The examiner can normally be reached on Monday-Friday 8:30-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ed Glick can be reached on 571 272-2490. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
Jurie Yun  
Examiner  
Art Unit 2882

October 10, 2007